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- AN - 1988-290728 [41]
- TI - Water-contg. produce sorter esp. for agricultural crops, e.g. potatoes - passes produce through capacitor fed by oscillator and coupled to synchro-phase detector with reference signal input to produce wt. signal
- AB - NL8700499 The oscillator produces two sinusoidal 3 kHz a.c. signals in anti-phase and with adjustable amplitude. These are connected to the outer plates (2,5) of first (2,3) and second (5,3) capacitors (C1,C2) respectively. The common plate (3) is connected via a current/voltage converter and a band pass filter tuned to the oscillator frequency, to the synchronous phase detector which also receives a reference signal 90 deg. out of phase with the capacitor (C1) feed signal to produce an output signal  $U_0 = k(C1-C2)$  wherein k is a scale factor determined by the set amplitude.
- The space between the plates (2,3) exceeds twice the largest product diameter and the lengths of the sides of these square plates are at least twice their spacing to achieve best possible linearity of response. The sides of plate (3) are around half as long as those of plate (2), e.g. 20 cm and 30 cm respectively, whilst those of plate (5) are half as long as of plate (3). The plates (3,5) are surrounded by earthed co-planar screens (4,6) to largely eliminate disturbing effects of objects outside the dielectric space. As in the absence of product the two capacities (C1,C2) are equal, the current at the common plate (3) is then zero. At the 3 kHz frequency used, the parasitic parallel resistance is negligible.
- ADVANTAGE - Uses simple inexpensive electronic components and operates more accurately than expensive mechanical size sorting system. Potatoes can be sorted by wt. with at least 10% accuracy at high speed of e.g. 40 m/sec.(2/2)
- IW - WATER CONTAIN PRODUCE SORT AGRICULTURE CROP POTATO PASS PRODUCE THROUGH CAPACITOR FEED OSCILLATOR COUPLE SYNCHRONOUS PHASE DET REFERENCE SIGNAL INPUT PRODUCE WEIGHT SIGNAL
- PN - NL8700499 A 19880916 DW198841 008pp
- IC - B07B13/08
- MC - T05-K X25-F06 X25-N01
- DC - P43 T05 X25
- PA - (VBER-N) VAN DEN BERG BLOKKE
- AP - NL19870000499 19870227
- PR - NL19870000499 19870227

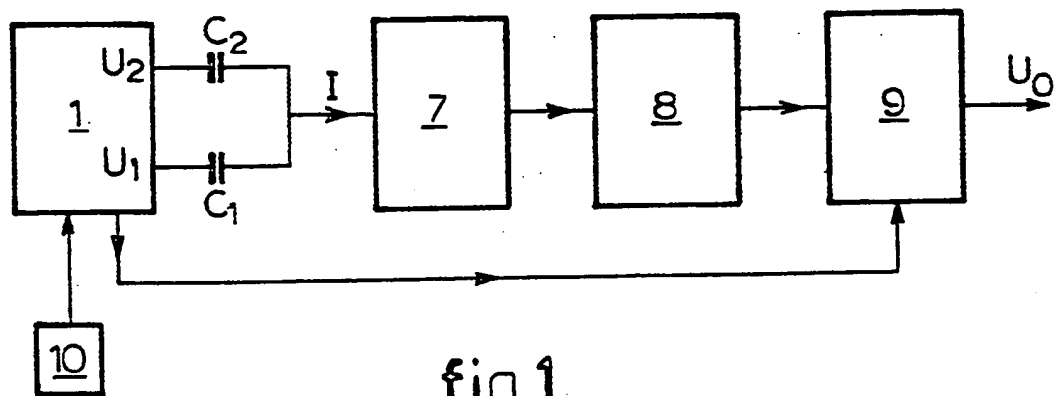


fig.1

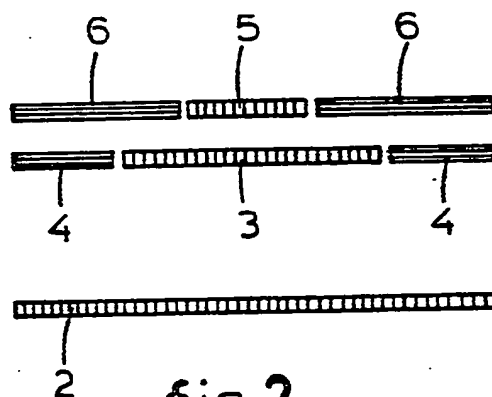


fig.2